



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,759	10/30/2003	Takushi Yokoyama	0425-1062P	6887
2292 7590 02/03/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER FELTON, AILEEN BAKER				
ART UNIT 1793		PAPER NUMBER		
NOTIFICATION DATE 02/03/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/695,759

Applicant(s)

YOKOYAMA ET AL.

Examiner

AILEEN FELTON

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6, 8, 9, 11-24 and 27 is/are pending in the application.
4a) Of the above claim(s) 5, 6, 8, 9 and 16-18 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 2-4, 11-15, 19-24 and 27 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-4, 11-15, 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (2004000362) in view of Lyon (5460668) and Tateno (5013782).

Sato et al discloses a gas generating composition comprising sodium carboxymethylcellulose from .5-5 % as a binder (para 0036), aluminum hydroxide from 0-10 % (para 0038), basic copper nitrate from 30-70 % (para 0019), guanidine nitrate from 40-60 % (para 0040), copper oxide from 0-10 % (para 0038).

Lyon teaches that it is known to use glass as a slag trap in gas generating compositions and indicates that many types of glass can be used and should have a softening point of around 590 Celsius.

Tateno teaches that phosphate glass has a softening point ranging from 400-800 Celsius (col. 5, lines 1-5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the glass as taught by Lyon since Lyon teaches that it is known for use as a slag trap with gas generating compositions and to use phosphate glass as taught by Tateno since Tateno suggests that it has a softening point from 400-800 and since Lyon indicates that glasses that have a softening point around 590 Celsius are desirable for use as slag traps and since Sato discloses the use of conventional slag traps (para 0034). It is also obvious to use glasses of various temperatures around 590 Celsius since Lyon teaches that glasses around this temperature can be used. It is well-settled that optimizing a result effective variable is well within the expected ability of a person of ordinary skill in the subject art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955). Alternatively, the claimed "550 Celsius" is considered to be "around" 590 Celsius.

4. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (2004000362) in view of Lyon (5460668) and Tateno (5013782) as applied to claims 1-4, 10-15, 19-24 above, and further in view of Kishi et al (4021275).

Kishi teaches the use of silicon dioxide with surface area of 50-450 m²/g as a slag trap for a gas generating composition (col. 4, lines 14-40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the silicon dioxide as taught by Kishi since Kishi teaches that it is a known slag trap for use with gas generating compositions and since Sato discloses the use of conventional slag traps (para 0034).

5. Claims 2-4, 11-15, 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (2004000362) in view of Lundstrom et al (6123790) and Tateno (5013782).

Sato et al discloses a gas generating composition comprising sodium carboxymethylcellulose from .5-5 % as a binder (para 0036), aluminum hydroxide from 0-10 % (para 0038), basic copper nitrate from 30-70 % (para 0019), guanidine nitrate from 40-60 % (para 0040), copper oxide from 0-10 % (para 0038).

Lundstrom et al teaches that it is known to use glass as a slag trap in a gas generating composition (col. 7, lines 35-50).

Tateno teaches that phosphate glass is a type of glass and has a softening point ranging from 400-800 Celsius (col. 5, lines 1-5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the glass as taught by Lundstrom since Lundstrom teaches that it is known to use glass as a slag trap with gas generating compositions and to use phosphate glass as taught by Tateno since Tateno teaches that phosphate glass is

known type of glass and since Sato discloses the use of conventional slag traps (para 0034).

6. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (2004000362) in view of Lyon (5460668) and Tateno (5013782) as applied to claims 1-4, 10-15, 19-24 above, and further in view of Kishi et al (4021275).

Kishi teaches the use of silicon dioxide with surface area of 50-450 m²/g as a slag trap for a gas generating composition (col. 4, lines 14-40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the silicon dioxide as taught by Kishi since Kishi teaches that it is a known slag trap for use with gas generating compositions and since Sato discloses the use of conventional slag traps (para 0034).

Response to Arguments

7. Applicant's arguments have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is obvious to use glass as taught by Lyon since Lyon teaches that it is known for use as a slag trap

with gas generating compositions and to use phosphate glass as taught by Tateno since Tateno suggests that it has a softening point from 400-800 and since Lyon indicates that glasses that have a softening point around 590 Celsius are desirable for use as slag traps and since Sato discloses the use of conventional slag traps. Further it is noted that the claimed 550 Celsius is considered to be "around" 590 Celsius since Lyon teaches that glasses around this temperature can be used

In response to applicant's argument that Tateno is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Tateno is utilized merely to show the softening point of phosphate glass, which is relevant to the art since Lyons suggests that glass with a softening point around 590 C can be used as a slag trap in gas generating compositions.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AILEEN FELTON whose telephone number is (571)272-6875. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aileen Felton/
Primary Examiner
Art Unit 1793